

Notice of Allowability

Application No.

10/591,203

Examiner

S. Devi, Ph.D.

Applicant(s)

MAIER ET AL.

Art Unit

1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's amendment filed 12/22/10.
2. ☒ The allowed claim(s) is/are claims 19, 21 and 24, now renumbered as claims 1, 2 and 3 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>201101</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>122210</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

ATTACHMENT TO NOTICE OF ALLOWABILITY

Continued Examination under 37 C.F.R 1.114

1) A request for continued examination under 37 C.F.R 1.114, including the fee set forth in 37 C.F.R 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R 1.114, and the fee set forth in 37 C.F.R 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R 1.114. Applicant's submission filed on 12/20/10 has been entered.

Applicant's Amendment

2) Acknowledgment is made of Applicant's amendment filed 12/20/10 in response to the final Office Action mailed 07/21/10.

Examiner's Amendment

3) An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicants, an amendment may be filed as provided by 37 C.F.R 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. The authorization to prepare this Examiner's amendment was provided by attorney David Provence in a telephonic interview on 12 January 2011. See the attached interview summary.

The instant application has been amended as indicated below.

(a) Claim 19 has been amended as indicated below:

--Claim 19 (Currently amended). An isolated bacterium wherein said isolated bacterium is *Salmonella typhimurium* ~~or *Salmonella typhi*~~, wherein the isolated bacterium does not express a functional NiFe hydrogenase protein, wherein the isolated bacterium comprises a deletion mutation to each of three NiFe hydrogenase genes present in the genome of the isolated bacterium, wherein each

mutation prevents the expression of the corresponding gene product, wherein the first deletion is flanked by nucleotides 1-136 and nucleotides 137-232 of SEQ ID NO: 7, wherein the second deletion is flanked by nucleotides 1-289 and nucleotides 290-518 of SEQ ID NO: 8, and wherein the third deletion is flanked by nucleotides 1-200 and nucleotides 201-333 of SEQ ID NO: 9.--

Status of Claims

4) Claims 1, 3, 5-8, 10-17, 20, 22 and 23 have been cancelled via the amendment filed 12/20/10.

Claims 19 and 21 have been amended via the amendment filed 12/20/10.

Claim 19 has been amended via this Examiner's amendment.

Claims 19, 21 and 24 are pending and are under prosecution.

Information Disclosure Statement

5) Acknowledgment is made of Applicants' information disclosure statement filed 12/22/10. The information referred to therein has been considered and a signed copy of the same is attached to this Office Action.

Rejection(s) Moot

6) The rejection of claims 3, 20 and 22 made in paragraph 8 of the Office Action mailed 07/21/10 under 35 U.S.C. § 112, second paragraph, as being indefinite, is moot in light of Applicant's cancellation of the claims.

7) The rejection of claims 1 and 5-8 made in paragraph 27 of the Office Action mailed 07/21/10 under 35 U.S.C § 102(b) as being anticipated by Kim et al. (Appl. Environ. Microbiol. 62: 1759-1763, 1996) as evidenced by Schlecht et al. (Naturwissenschaften 80: 9-17, 1993, abstract), is moot in light of Applicant's cancellation of the claims.

8) The rejection of claims 1, 3, 5, 6 and 20 made in paragraph 28 of the Office Action mailed 07/21/10 under 35 U.S.C. § 102(b) as being anticipated by Sawers et al. (J. Bacteriol. 168: 398-404, 1986, of record), is moot in light of Applicant's cancellation of the claims.

9) The rejection of claim 10 made in paragraph 30 of the Office Action mailed 07/21/10 under 35 U.S.C. § 103(a) as being unpatentable over Kim et al. (Appl. Environ. Microbiol. 62: 1759-1763, 1996) as applied to claims 7 and 1 and further in view of Raettig Hansujurgen (US 3651214 A, of record), is moot in light of Applicant's cancellation of the claim.

Rejection(s) Withdrawn

10) The rejection of claims 19 and 21 made in paragraph 25 of the Office Action mailed 07/21/10 under 35 U.S.C. § 112, second paragraph, as being indefinite, is withdrawn in light of Applicants' amendment to the claim.

Remarks

11) Claims 19, 21 and 24, now renumbered as claims 1, 2 and 3 respectively, are allowed.

12) Papers related to this application may be submitted to Group 1600, AU 1645 by facsimile transmission. The Fax number for submission of amendments, responses and/or papers is (571) 273-8300, which receives transmissions 24 hours a day and 7 days a week.

13) Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAG or Public PAIR. Status information for unpublished applications is available through Private PAIR

only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAA system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

14) Any inquiry concerning this communication or earlier communications from the Examiner should be directed to S. Devi, Ph.D., whose telephone number is (571) 272-0854. A message may be left on the Examiner's voice mail system. The Examiner can normally be reached on Monday to Friday from 7.15 a.m. to 4.15 p.m. except one day each bi-week, which would be disclosed on the Examiner's voice mail system.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's acting supervisor, Patricia Duffy, can be reached at (571)-272-0855.

/S. Devi/
Primary Examiner
AU 1645

January, 2011